

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of the claims in the application.

Listing of Claims:

1-50 (Cancelled)

51. (Currently Amended) A compound of the general formula:



wherein

M is an optical label or a metal chelator optionally complexed with a radionuclide;

N is 0, an alpha amino acid, a non-alpha amino acid with a cyclic group or other linking group;

O is an alpha amino acid or a non-alpha amino acid with a cyclic group;

P is 0, an alpha amino acid, a non-alpha amino acid with a cyclic group, or other linking group; and

G is a GRP receptor targeting peptide selected from the group consisting of QWAVGHLM-OH (SEQ ID NO: 1), QWAVGHLM -NH₂ (SEQ ID NO: 1), QWAVGHFL -NH₂ (SEQ ID NO: 11), QRLGNQWAVGHLM-NH₂ (SEQ ID NO: 3), QRYGNQWAVGHLM-NH₂ (SEQ ID NO: 4), QKYGNQWAVGHLM-NH₂ (SEQ ID NO: 5), QWAVGHL-NH-Pentyl (SEQ ID NO: 6), QWSVaHLM-NH₂ (SEQ ID NO: 7), QWAVGHLL-NH₂ (SEQ ID NO: 8), QWAV-Bala-HF-Nle-NH₂ (SEQ ID NO: 9), QWAGHFL-NH₂ (SEQ ID NO: 10), LWAVGSFM-NH₂ (SEQ ID NO: 12), HWAVGHLM-NH₂ (SEQ ID NO: 13), LWATGHFM-NH₂ (SEQ ID NO: 17), LWAVGSFM -NH₂ (SEQ ID NO: 12), EWAVGHLM-NH₂ (SEQ ID NO: 2), QWAVaHLM -NH₂ (SEQ ID NO: 15), QWAVGHFM-NH₂ (SEQ ID NO: 14), Nme-

QWAVGHLM-NH₂ (SEQ ID NO: 1), Q-Ψ[CSNH]WAVGHLM-NH₂ (SEQ ID NO: 1), Q-Ψ[CH₂NH]-WAVGHLM-NH₂ (SEQ ID NO: 1), Q-Ψ[CH=CH]WAVGHLM-NH₂ (SEQ ID NO: 1), α-MeQWAVGHLM-NH₂ (SEQ ID NO: 24), QNme-WAVGHLM-NH₂ (SEQ ID NO: 29), QW-Ψ[CSNH]-AVGHLM-NH₂ (SEQ ID NO: 1), QW-Ψ[CH₂NH]-AVGHLM-NH₂ (SEQ ID NO: 1), QW-Ψ[CH=CH]-AVGHLM-NH₂ (SEQ ID NO: 1), Q-α-Me-WAVGHLM-NH₂ (SEQ ID NO: 30), QW-Nme-AVGHLM-NH₂ (SEQ ID No: 31), QWA=Ψ[CSNH]-VGHLM-NH₂ (SEQ ID NO: 1), QWA-Ψ[CH₂NH]-VGHLM-NH₂ (SEQ ID No: 1), QW-Aib-VGHLM-NH₂ (SEQ ID NO: 1), QWAV-Sar-HLM-NH₂ (SEQ ID No: 32), QWAVG-Ψ[CSNH]-HLM-NH₂ (SEQ ID NO: 1), QWAVG-Ψ[CH=CH]-HLM-NH₂ (SEQ ID NO: 1), QWAV-Dala-HLM-NH₂ (SEQ ID NO: 15), QWAVG-Nme-His-LM-NH₂ (SEQ ID NO: 33), QWAVG-H-Ψ[CSNH]-L-M-NH₂ (SEQ ID NO: 1), QWAVG-H-Ψ[CH₂NH]-LM-NH₂ (SEQ ID NO: 1), QWAVGH-Ψ[CH=CH]-LM-NH₂ (SEQ ID NO: 1), QWAVG-α-Me-HLM-NH₂ (SEQ ID NO: 34), QWAVGH-Nme-LM-NH₂ (SEQ ID NO: 35), and QWAVGH-α-MeLM-NH₂ (SEQ ID NO: 28),

wherein at least one of N, O or P is a non-alpha amino acid with a cyclic group.

52. (Cancelled)

53. (Currently Amended) The compound of claim 51, wherein the non-alpha amino acid with a cyclic group is selected from the group consisting of:

4-aminobenzoic acid;
 4-aminomethyl benzoic acid;
 trans-4-aminomethylcyclohexane carboxylic acid;
 4-(2-aminoethoxy)benzoic acid;
 isonipecotic acid;
 2-aminomethylbenzoic acid;
 4-amino-3-nitrobenzoic acid;
 4-(3-carboxymethyl-2-keto-1-benzimidazolyl)-piperidine;
 6-(piperazin-1-yl)-4-(3H)-quinazolinone-3-acetic acid;
 (2S,5S)-5-amino-1,2,4,5,6,7-hexahydro-azepino[3,21-hi]indole-4-one-2-carboxylic acid;
 (4S,7R)-4-amino-6-aza-5-oxo-9-thiabicyclo[4.3.0]nonane-7-carboxylic acid;

3-carboxymethyl-1-phenyl-1,3,8-triazaspiro[4.5]decan-4-one;
N1-piperazineacetic acid;
N-4-aminoethyl-N-1-acetic acid;
(3S)-3-amino-1-carboxymethylcaprolactam; and
(2S,6S,9)-6-amino-2-carboxymethyl-3,8-diazabicyclo-[4,3,0]-nonane-1,4-dione;
1-naphthylalanine;
3'-aminomethyl-biphenyl-3-carboxylic acid;
4-aminomethylphenoxyacetic acid;
4-aminophenylacetic acid;
4-phenoxy;
3-aminomethylbenzoic acid;
4-aminomethyl-3-methoxybenzoic acid;
4-hydrazinobenzoyl;
6-aminonicotinic acid;
4-amino-2'-methylbiphenyl-4-carboxylic acid;
Terephthalic acid;
3-aminobenzoic acid;
6-aminonaphthoic acid;
3-amino-3-deoxycholoic acid;
3-methoxy-4-aminobenzoic acid;
3-chloro-4-aminobenzoic acid;and
3-hydroxy-4-aminobenzoic acid.

54. (Original) The compound of claim 51, wherein M is selected from the group consisting of: DTPA, DOTA, DO3A, HPDO3A, EDTA, and TETA.

55. (Original) The compound of claim 51, wherein M is selected from the group consisting of EHPG and derivatives thereof.

56. (Currently Amended) The compound of claim ~~54~~ 55, wherein M is selected from the group consisting of 5-Cl-EHPG, 5-Br-EHPG, 5-Me-EHPG, 5-t-Bu-EHPG, and 5-sec-Bu-EHPG.

57. (Original) The compound of claim 51, wherein M is selected from the group consisting of benzodiethylenetriamine pentaacetic acid (benzo-DTPA) and derivatives thereof.

58. (Currently Amended) The compound of claim ~~54~~ 57, wherein M is selected from the group consisting of dibenzo-DTPA, phenyl-DTPA, diphenyl-DTPA, benzyl-DTPA, and dibenzyl DTPA.

59. (Original) The compound of claim 51, wherein M is selected from the group consisting of HBED and derivatives thereof.

60. (Cancelled)

61. (Original) The compound of claim 51, wherein M is selected from the group consisting of benzo-DOTA, dibenzo-DOTA, and benzo-NOTA, benzo-TETA, benzo-DOTMA, and benzo-TETMA.

62. (Original) The compound of claim 51, wherein M is selected from the group consisting of derivatives of 1,3-propylenediaminetetraacetic acid (PDTA) and triethylenetetraaminehexaacetic acid (TTHA); derivatives of 1,5,10-N,N',N''-tris(2,3-dihydroxybenzoyl)-tricatecholate (LICAM) and 1,3,5-N,N',N''-tris(2,3-dihydroxybenzoyl) aminomethylbenzene (MECAM).

63. (Currently amended) The compound of claim 51, selected from the group consisting of:

~~DO3A-monoamide-Gly-4-aminobenzoic acid-BBN(7-14) wherein the BBN(7-14) sequence is SEQ. ID NO: 1;~~

~~DO3A-monoamide-4-aminomethyl benzoic acid-BBN(7-14) wherein the BBN(7-14) sequence is SEQ. ID NO: 1;~~

~~DO3A-monoamide-trans-4-aminomethylcyclohexyl carboxylic acid-BBN(7-14) wherein the BBN(7-14) sequence is SEQ. ID NO: 1;~~

~~DO3A-monoamide-4-(2-aminoethoxy)benzoic acid-BBN(7-14) wherein the BBN(7-14) sequence is SEQ. ID NO: 1;~~

~~DO3A-monoamide-Gly-isonipecotic acid-BBN(7-14) wherein the BBN(7-14) sequence is SEQ. ID NO: 1;~~

~~DO3A-monoamide-2-aminomethylbenzoic acid-BBN(7-14) wherein the BBN(7-14) sequence is SEQ. ID NO: 1;~~

~~DO3A-monoamide-4-aminomethyl-3-nitrobenzoic acid-BBN(7-14) wherein the BBN(7-14) sequence is SEQ. ID NO: 1;~~

~~DO3A-monoamide-8-amino-3,6-dioxaoctanoic acid-1-naphthylalanine-BBN(7-14) wherein the BBN(7-14) sequence is SEQ. ID NO: 1;~~

~~DO3A-monoamide-4-(3-carboxymethyl-2-keto-1-benzimidazolyl)piperidine-BBN(7-14) wherein the BBN(7-14) sequence is SEQ. ID NO: 1;~~

~~DO3A-monoamide-6-(piperazin-1-yl)-4-(3H)-quinazolinone-3-acetic acid-BBN(7-14) wherein the BBN(7-14) sequence is SEQ. ID NO: 1;~~

~~DO3A monoamide (2S,5S) 5-amino-1,2,4,5,6,7-hexahydro-azepino[3,21-hi]indole-4-one-2-carboxylic acid-BBN(7-14) wherein the BBN(7-14) sequence is SEQ. ID NO: 1;~~

~~DO3A monoamide (4S,7R) 4-amino-6-aza-5-oxo-9-thiabicyclo[4.3.0]nonane-7-carboxylic acid-BBN(7-14) wherein the BBN(7-14) sequence is SEQ. ID NO: 1;~~

~~DO3A monoamide N,N-dimethylglycine-BBN(7-14) wherein the BBN(7-14) sequence is SEQ. ID NO: 1;~~

~~DO3A monoamide 3-carboxymethyl-1-phenyl-1,3,8-triazaspiro[4.5]decan-4-one-BBN(7-14) wherein the BBN(7-14) sequence is SEQ. ID NO: 1;~~

~~DO3A monoamide N1-piperazineacetic acid-BBN(7-14) wherein the BBN(7-14) sequence is SEQ. ID NO: 1;~~

~~DO3A monoamide N-4-aminoethyl-N-1-piperazineacetic acid-BBN(7-14) wherein the BBN(7-14) sequence is SEQ. ID NO: 1;~~

~~DO3A monoamide (3S) 3-amino-1-carboxymethylcaprolactam-BBN(7-14) wherein the BBN(7-14) sequence is SEQ. ID NO: 1;~~

~~DO3A monoamide (2S,6S,9) 6-amino-2-carboxymethyl-3,8-diazabicyclo-[4,3,0]-nonane-1,4-dione-BBN(7-14) wherein the BBN(7-14) sequence is SEQ. ID NO: 1;~~

~~DO3A monoamide 5-aminopentanoic acid-trans-4-aminomethylcyclohexane-1-carboxylic acid-BBN(7-14) wherein the BBN(7-14) sequence is SEQ. ID NO: 1;~~

~~DO3A monoamide trans-4-aminomethylcyclohexane-1-carboxylic acid-D-phenylalanine-BBN(7-14) wherein the BBN(7-14) sequence is SEQ. ID NO: 1;~~

~~DO3A monoamide 4-aminomethylbenzoic acid-8-amino-3,6-dioxaoctanoic acid-BBN(7-14) wherein the BBN(7-14) sequence is SEQ. ID NO: 1;~~

~~DO3A monoamide 4-benzoyl-(L)-phenylalanine-trans-4-aminomethylcyclohexane-1-carboxylic acid-BBN(7-14) wherein the BBN(7-14) sequence is SEQ. ID NO: 1;~~

~~DO3A monoamide trans-4-aminomethylcyclohexane-1-carboxylic acid-Arg-BBN(7-14) wherein the BBN(7-14) sequence is SEQ. ID NO: 1;~~

~~DO3A monoamide trans-4-aminomethylcyclohexane-1-carboxylic acid-Lys-BBN(7-14) wherein the BBN(7-14) sequence is SEQ. ID NO: 1;~~

~~DO3A monoamide trans-4-aminomethylcyclohexane-1-carboxylic acid-diphenylalanine-BBN(7-14) wherein the BBN(7-14) sequence is SEQ. ID NO: 1;~~

~~DO3A monoamide trans-4-aminomethylcyclohexane-1-carboxylic acid-1-naphthylalanine-BBN(7-14) wherein the BBN(7-14) sequence is SEQ. ID NO: 1;~~

~~DO3A monoamide trans-4-aminomethylcyclohexane-1-carboxylic acid-8-amino-3,6-dioxaoctanoic acid-BBN(7-14) wherein the BBN(7-14) sequence is SEQ. ID NO: 1;~~

~~DO3A monoamide trans-4-aminomethylcyclohexane-1-carboxylic acid-Ser-BBN(7-14) wherein the BBN(7-14) sequence is SEQ. ID NO: 1;~~

~~DO3A monoamide trans-4-aminomethylcyclohexane-1-carboxylic acid-2,3-diaminopropionic acid-BBN(7-14) wherein the BBN(7-14) sequence is SEQ. ID NO: 1;~~

~~DO3A monoamide trans-4-aminomethylcyclohexane-1-carboxylic acid-biphenylalanine-BBN(7-14) wherein the BBN(7-14) sequence is SEQ. ID NO: 1;~~

~~DO3A monoamide trans-4-aminomethylcyclohexane-1-carboxylic acid-(2S,5S)-5-amino-1,2,4,5,6,7-hexahydro-azepino[3,21-hi]indole-4-one-2-carboxylic acid-BBN(7-14) wherein the BBN(7-14) sequence is SEQ. ID NO: 1;~~

~~DO3A monoamide trans-4-aminomethylcyclohexane-1-carboxylic acid-trans-4-aminomethylcyclohexane-1-carboxylic acid-BBN(7-14) wherein the BBN(7-14) sequence is SEQ. ID NO: 1;~~

~~DO3A-monoamide 8-amino-3,6-dioxaoctanoic acid-phenylalanine-BBN(7-14) wherein the BBN(7-14) sequence is SEQ. ID NO: 1;~~
~~DO3A-monoamide trans-4-aminomethylcyclohexane-1-carboxylic acid-phenylalanine-BBN(7-14) wherein the BBN(7-14) sequence is SEQ. ID NO: 1;~~
~~DO3A-monoamide 8-aminooctanoic acid-trans-4-aminomethylcyclohexane-1-carboxylic acid-BBN(7-14) wherein the BBN(7-14) sequence is SEQ. ID NO: 1;~~
~~DO3A-monoamide 4'-aminomethyl-biphenyl-1-carboxylic acid-BBN(7-14) wherein the BBN(7-14) sequence is SEQ. ID NO: 1;~~
~~DO3A-monoamide 3'-aminomethyl-biphenyl-3-carboxylic acid-BBN(7-14) wherein the BBN(7-14) sequence is SEQ. ID NO: 1;~~
~~CMDOTA-Gly-4-aminobenzoic acid-BBN(7-14) wherein the BBN(7-14) sequence is SEQ. ID NO: 1;~~
~~DO3A-monoamide 4-aminomethylphenoxyacetic acid-BBN(7-14) wherein the BBN(7-14) sequence is SEQ. ID NO: 1;~~
~~DO3A-monoamide Gly-4-aminophenylacetic acid-BBN(7-14) wherein the BBN(7-14) sequence is SEQ. ID NO: 1;~~
~~HPDO3A-4-phenoxy-BBN(7-14) wherein the BBN(7-14) sequence is SEQ. ID NO: 1;~~
~~DO3A-monoamide 3-aminomethylbenzoic acid-BBN(7-14) wherein the BBN(7-14) sequence is SEQ. ID NO: 1;~~
~~DO3A-monoamide 4-aminomethylphenylacetic acid-BBN(7-14) wherein the BBN(7-14) sequence is SEQ. ID NO: 1;~~
~~DO3A-monoamide 4-aminomethyl-3-methoxybenzoic acid-BBN(7-14) wherein the BBN(7-14) sequence is SEQ. ID NO: 1;~~
~~Boa-Gly-4-aminobenzoic acid-BBN(7-14) wherein the BBN(7-14) sequence is SEQ. ID NO: 1;~~
~~DO3A-monoamide Gly-4-hydrazinobenzoyl-BBN(7-14) wherein the BBN(7-14) sequence is SEQ. ID NO: 1;~~
~~DO3A-monoamide 4-aminobenzoic acid-BBN(7-14) wherein the BBN(7-14) sequence is SEQ. ID NO: 1;~~
~~DO3A-monoamide 4-aminobenzoic acid-Gly-BBN(7-14) wherein the BBN(7-14) sequence is SEQ. ID NO: 1;~~
~~DO3A-monoamide Gly-6-Aminonicotinic acid-BBN(7-14) wherein the BBN(7-14) sequence is SEQ. ID NO: 1;~~
~~DO3A-monoamide Gly-4'-Amino-2'-methyl-biphenyl-4-carboxylic acid-BBN(7-14) wherein the BBN(7-14) sequence is SEQ. ID NO: 1;~~
~~DO3A-monoamide Gly-3'-Aminobiphenyl-3-carboxylic acid-BBN(7-14) wherein the BBN(7-14) sequence is SEQ. ID NO: 1;~~
~~DO3A-monoamide Gly-1,2-diaminoethyl-Terephthalic acid-BBN(7-14) wherein the BBN(7-14) sequence is SEQ. ID NO: 1;~~
~~DO3A-monoamide Gly-Gly-4-aminobenzoic acid-BBN(7-14) wherein the BBN(7-14) sequence is SEQ. ID NO: 1;~~
DO3A-monoamide-G-4-aminobenzoic acid-EWAVGHLM-NH₂ (SEQ ID NO: 2);
DO3A-monoamide-G-4-aminobenzoic acid-QWAVGHLM-OH (SEQ ID NO: 1);
DO3A-monoamide-G-4-aminobenzoic acid-(D)-Phe-BBN(7-14);
DO3A-monoamide-G-4-aminobenzoic acid-QRLGNQWAVGHLM-NH₂ (SEQ ID NO: 3);
DO3A-monoamide-G-4-aminobenzoic acid-QRYGNQWAVGHLM-NH₂ (SEQ ID NO: 4);
DO3A-monoamide-G-4-aminobenzoic acid-QKYGNQWAVGHLM-NH₂ (SEQ ID NO: 5);
DO3A-monoamide-G-4-aminobenzoic acid-(D)-Phe-QWAVGHL-NH-Pentyl (SEQ ID NO: 6);

DO3A-monoamide-G-4-aminobenzoic acid-QWSVaHLM-NH₂ (SEQ ID NO: 7);
 DO3A-monoamide-G-4-aminobenzoic acid-(D)-Phe-QWAVGHLL-NH₂ (SEQ ID NO: 8);
 DO3A-monoamide-G-4-aminobenzoic acid-(D)-Tyr-QWAV-Bala-HF-Nle-NH₂ (SEQ ID NO: 9);
 DO3A-monoamide-G-4-aminobenzoic acid-Phe-QWAV-Bala-HF-Nle-NH₂ (SEQ ID NO: 9);
 DO3A-monoamide-G-4-aminobenzoic acid-QWAGHFL-NH₂ (SEQ ID NO: 10);
 DO3A-monoamide-G-4-aminobenzoic acid-LWAVGSFM-NH₂ (SEQ ID NO: 12);
 DO3A-monoamide-G-4-aminobenzoic acid-HWAVGHLM-NH₂ (SEQ ID NO: 13);
 DO3A-monoamide-G-4-aminobenzoic acid-LWAVGSFM-NH₂ (SEQ ID NO: 12);
 DO3A-monoamide-G-4-aminobenzoic acid-QWAVGHFM-NH₂ (SEQ ID NO: 14);
~~DO3A-monoamide-Gly-3-aminobenzoic acid-BBN(7-14) wherein the BBN(7-14) sequence is SEQ. ID NO: 1;~~
~~DO3A-monoamide-Gly-6-aminonaphthoic acid-BBN(7-14) wherein the BBN(7-14) sequence is SEQ. ID NO: 1;~~
~~DO3A-monoamide-Gly-4-methylaminobenzoic acid-BBN(7-14) wherein the BBN(7-14) sequence is SEQ. ID NO: 1;~~
~~Cm4pm10d2a-Gly-4-aminobenzoic acid-BBN(7-14) wherein the BBN(7-14) sequence is SEQ. ID NO: 1;~~
~~N,N-dimethylglycine-Ser-Cys(Acm)-Gly-Gly-4-aminobenzoic acid-BBN(7-14) wherein the BBN(7-14) sequence is SEQ. ID NO: 1;~~
~~N,N-dimethylglycine-Ser-Cys(Acm)-Gly-Gly-3-amino-3-deoxycholeic acid-BBN(7-14) wherein the BBN(7-14) sequence is SEQ. ID NO: 1;~~
~~DO3A-monoamide-Gly-3-methoxy-4-aminobenzoic acid-BBN(7-14) (SEQ ID NO: 1);~~
~~DO3A-monoamide-Gly-3-chloro-4-aminobenzoic acid-BBN(7-14) (SEQ ID NO: 1);~~
~~DO3A-monoamide-Gly-3-methyl-4-aminobenzoic acid-BBN(7-14) (SEQ ID NO: 1);~~
~~DO3A-monoamide-Gly-3-hydroxy-4-aminobenzoic acid-BBN(7-14) (SEQ ID NO: 1);~~
~~(DO3A-monoamide)₂-N,N'-Bis(2-aminoethyl)-succinamic acid-BBN(7-14) (SEQ ID NO: 1);~~
 DO3A-monoamide-G-4-aminobenzoic acid-QWAVGHFL-NH₂ (SEQ ID NO: 11);
 DO3A-monoamide-4-aminomethylbenzoic acid-L-1-Naphthylalanine-QWAVGHLM-NH₂ (SEQ ID NO: 1); and
 DO3A-monoamide-G-4-aminobenzoic acid-QWAVGNMeHisLM-NH₂ (SEQ ID NO: 16).

64. (Currently Amended) The compound of any one of claims 51, 52 or 53, wherein the optical label is selected from the group consisting of organic chromophores, organic fluorophores, light-absorbing compounds, light-reflecting compounds, light-scattering compounds, and bioluminescent molecules.

65. (Original) A method of imaging comprising the steps of:
 administering to a patient a diagnostic imaging agent comprising the compound of claim 51 wherein M is a metal chelator complexed with a diagnostic radionuclide, and

imaging said patient.

66. (Original) A method of imaging comprising the steps of:

administering to a patient a diagnostic imaging agent comprising the compound of claim 63, and

imaging said patient.

67. (Original) A method of imaging comprising the steps of:

administering to a patient a diagnostic imaging agent comprising the compound of claim 51, wherein M is an optical label, and

imaging said patient.

68. (Original) A method for preparing a diagnostic imaging agent comprising the step of adding to an injectable medium a substance comprising the compound of claim 51.

69. (Currently Amended) A method of treating a patient in need of radiotherapy comprising the step of administering to a patient a radiotherapeutic agent comprising the compound of claim 51 complexed with a therapeutic radionuclide.

70. (Original) A method of preparing a radiotherapeutic agent comprising the step of adding to an injectable medium a substance comprising the compound of claim 51.

71-81 (Cancelled)

82. (Currently Amended) A compound of the general formula:



wherein

M is DO3A, optionally complexed with a radionuclide;

N is 0, an alpha or non-alpha amino acid or other linking group;

O is an alpha or non-alpha amino acid; and

P is 0, an alpha or non-alpha amino acid or other linking group,
 and G is a GRP receptor targeting peptide selected from the group
consisting of QWAVGHLM-OH (SEQ ID NO: 1), QWAVGHLM-NH₂ (SEQ ID NO: 1),
QWAVGHFL -NH₂ (SEQ ID NO: 11), QRLGNQWAVGHLM-NH₂ (SEQ ID NO: 3),
QRYGNQWAVGHLM-NH₂ (SEQ ID NO: 4), QKYGNQWAVGHLM-NH₂ (SEQ ID NO: 5),
QWAVGHL-NH-Pentyl (SEQ ID NO: 6), QWSVaHLM-NH₂ (SEQ ID NO: 7), QWAVGHLL-
NH₂ (SEQ ID NO: 8), QWAV-Bala-HF-Nle-NH₂ (SEQ ID NO: 9), QWAGHFL-NH₂ (SEQ ID
NO: 10), LWAVGSFM-NH₂ (SEQ ID NO: 12), HWAVGHLM-NH₂ (SEQ ID NO: 13),
LWATGHFM-NH₂ (SEQ ID NO: 17), LWAVGSFM -NH₂ (SEQ ID NO: 12), EWAVGHLM-
NH₂ (SEQ ID NO: 2), QWAVaHLM -NH₂ (SEQ ID NO: 15), QWAVGHFM-NH₂ (SEQ ID NO:
14), Nme-QWAVGHLM- NH₂ (SEQ ID NO: 1), Q-Ψ[CSNH]WAVGHLM-NH₂ (SEQ ID NO:
1), Q-Ψ[CH₂NH]-WAVGHLM-NH₂ (SEQ ID NO: 1), Q-Ψ[CH=CH]WAVGHLM-NH₂ (SEQ
ID NO: 1), α-MeQWAVGHLM-NH₂ (SEQ ID NO: 24), QNme-WAVGHLM-NH₂ (SEQ ID NO:
29), QW-Ψ[CSNH]-AVGHLM- NH₂ (SEQ ID NO: 1), QW-Ψ[CH₂NH]-AVGHLM-NH₂ (SEQ
ID NO: 1), QW-Ψ[CH=CH]-AVGHLM- NH₂ (SEQ ID NO: 1), Q-α-Me-WAVGHLM-NH₂
(SEQ ID NO: 30), QW-Nme-AVGHLM-NH₂ (SEQ ID NO: 31), QWA=Ψ[CSNH]-VGHLM-
NH₂ (SEQ ID NO: 1), QWA-Ψ[CH₂NH]-VGHLM-NH₂ (SEQ ID NO: 1), QW-Aib-VGHLM-
NH₂ (SEQ ID NO: 1), QWAV-Sar-HLM-NH₂ (SEQ ID NO: 32), QWAVG-Ψ[CSNH]-HLM-
NH₂ (SEQ ID NO: 1), QWAVG-Ψ[CH=CH]-HLM-NH₂ (SEQ ID NO: 1), QWAV-Dala-HLM-
NH₂ (SEQ ID NO: 15), QWAVG-Nme-His-LM-NH₂ (SEQ ID NO: 33), QWAVG-H-Ψ[CSNH]-
L-M-NH₂ (SEQ ID No: 1), QWAVG-H-Ψ[CH₂NH]-LM-NH₂ (SEQ ID NO: 1), QWAVGH-
Ψ[CH=CH]-LM-NH₂ (SEQ ID NO: 1), QWAVG-α-Me-HLM-NH₂ (SEQ ID NO: 34),
QWAVGH-Nme-LM-NH₂ (SEQ ID NO: 35), and QWAVGH-α-MeLM-NH₂ (SEQ ID NO: 28).

wherein at least one of N, O or P is 4-aminobenzoic acid.

83. (Cancelled)

84. (Currently Amended) A method of phototherapy comprising administering to a patient a compound of ~~any one of claims 1, 20 or~~ claim 51 wherein M is an optical label useful in phototherapy.

85. (Currently amended) A compound selected from the group consisting of:

DO3A-monoamide- G-4-aminobenzoic acid-QWAVaHLM-NH₂ (SEQ ID NO: 15),
 DO3A-monoamide- G-4-aminobenzoic acid-fQWAVGHLM-NH₂ (SEQ ID NO: 1),
 DO3A-monoamide- G-4-aminobenzoic acid-fQWAVGHLL-NH₂ (SEQ ID NO: 8),
 DO3A-monoamide- G-4-aminobenzoic acid-fQWAVGHL-NH-pentyl (SEQ ID NO: 6),
 DO3A-monoamide- G-4-aminobenzoic acid-yQWAV-Bala-HFNle-NH₂ (SEQ ID NO: 9),
 DO3A-monoamide- G-4-aminobenzoic acid-fQWAV-Bala-HFNle-NH₂ (SEQ ID NO: 9),
 DO3A-monoamide- G-4-aminobenzoic acid-QWAVGHFL-NH₂ (SEQ ID NO: 11),
 DO3A-monoamide- G-4-aminobenzoic acid-QWAVGNMeHisLM-NH₂ (SEQ ID NO: 16),
 DO3A-monoamide- G-4-aminobenzoic acid-LWAVGSFM-NH₂ (SEQ ID NO: 12),
 DO3A-monoamide- G-4-aminobenzoic acid-HWAVGHLM-NH₂ (SEQ ID NO: 13),
 DO3A-monoamide- G-4-aminobenzoic acid-LWATGHFM-NH₂ (SEQ ID NO: 17),
 DO3A-monoamide- G-4-aminobenzoic acid-QWAVGHFM-NH₂ (SEQ ID NO: 14),
 DO3A-monoamide- G-4-aminobenzoic acid-QRLGNQWAVGHLM-NH₂ (SEQ ID NO: 3),
 DO3A-monoamide- G-4-aminobenzoic acid-QRYGNQWAVGHLM-NH₂ (SEQ ID NO: 4),
 DO3A-monoamide- G-4-aminobenzoic acid-QKYGNQWAVGHLM-NH₂ (SEQ ID NO: 5),
 Pglu-Q-Lys(DO3A-monoamide- G-4-aminobenzoic acid)-LGNQWAVGHLM-NH₂ (SEQ ID NO: 18),
~~DO3A-monoamide- G-3-amino-3-deoxycholic acid-QWAVaHLM-NH₂ (SEQ ID NO: 15),~~

~~DO3A monoamide-G-3-amino-3-deoxycholic acid-fQWAVGHLM-NH₂(SEQ ID NO: 1),~~
~~DO3A monoamide-G-3-amino-3-deoxycholic acid-fQWAVGHLL-NH₂(SEQ ID NO: 8),~~
~~DO3A monoamide-G-3-amino-3-deoxycholic acid-fQWAVGHL-NH-pentyl-(SEQ ID NO: 6),~~
~~DO3A monoamide-G-3-amino-3-deoxycholic acid-yQWAV-Bala-HFNle-NH₂(SEQ ID NO: 9),~~
~~DO3A monoamide-G-3-amino-3-deoxycholic acid-fQWAV-Bala-HFNle-NH₂(SEQ ID NO: 9),~~
~~DO3A monoamide-G-3-amino-3-deoxycholic acid-QWAVGHFL-NH₂(SEQ ID NO: 11),~~
~~DO3A monoamide-G-3-amino-3-deoxycholic acid-QWAVGNMeHLMNH₂(SEQ ID NO: 16),~~
~~DO3A monoamide-G-3-amino-3-deoxycholic acid-LWAVGSFM-NH₂(SEQ ID NO: 12),~~
~~DO3A monoamide-G-3-amino-3-deoxycholic acid-HWAVGHLM-NH₂(SEQ ID NO: 13),~~
~~DO3A monoamide-G-3-amino-3-deoxycholic acid-LWATGHFM-NH₂(SEQ ID NO: 17),~~
~~DO3A monoamide-G-3-amino-3-deoxycholic acid-QWAVGHFM-NH₂(SEQ ID NO: 14),~~
~~DO3A monoamide-G-3-amino-3-deoxycholic acid-QRLGNQWAVGlyHLM-NH₂(SEQ ID NO: 3),~~
~~DO3A monoamide-G-3-amino-3-deoxycholic acid-QRYGNQWAVGHLM-NH₂(SEQ ID NO: 4),~~
~~DO3A monoamide-G-3-amino-3-deoxycholic acid-QKYGNQWAVGHLM-NH₂(SEQ ID NO: 5),~~
~~Pglu-Q-Lys(DO3A monoamide-G-3-amino-3-deoxycholic acid)-LGNQWAVGHLM-NH₂(SEQ ID NO: 18).~~

86. (Currently Amended) The method of ~~any one of claims 16, 17, 39, 44, 49 or~~
69 further comprising administering a chemotherapeutic or other therapeutic agent.

87. (Cancelled)

88. (Currently Amended) A method for targeting the gastrin releasing peptide
receptor (GRP-R) and neuromedin-B receptor (NMB-R), said method comprising administering
a compound of any one of claims 51 or 82, ~~the general formula:~~



~~wherein~~

~~M is an optical label or a metal chelator, optionally complexed with a
radionuclide;~~

~~N is 0, an alpha or non-alpha amino acid or other linking group;~~

~~O is an alpha or non-alpha amino acid; and~~

~~P is 0, an alpha or non-alpha amino acid or other linking group,~~

~~and G is a GRP receptor targeting peptide,~~

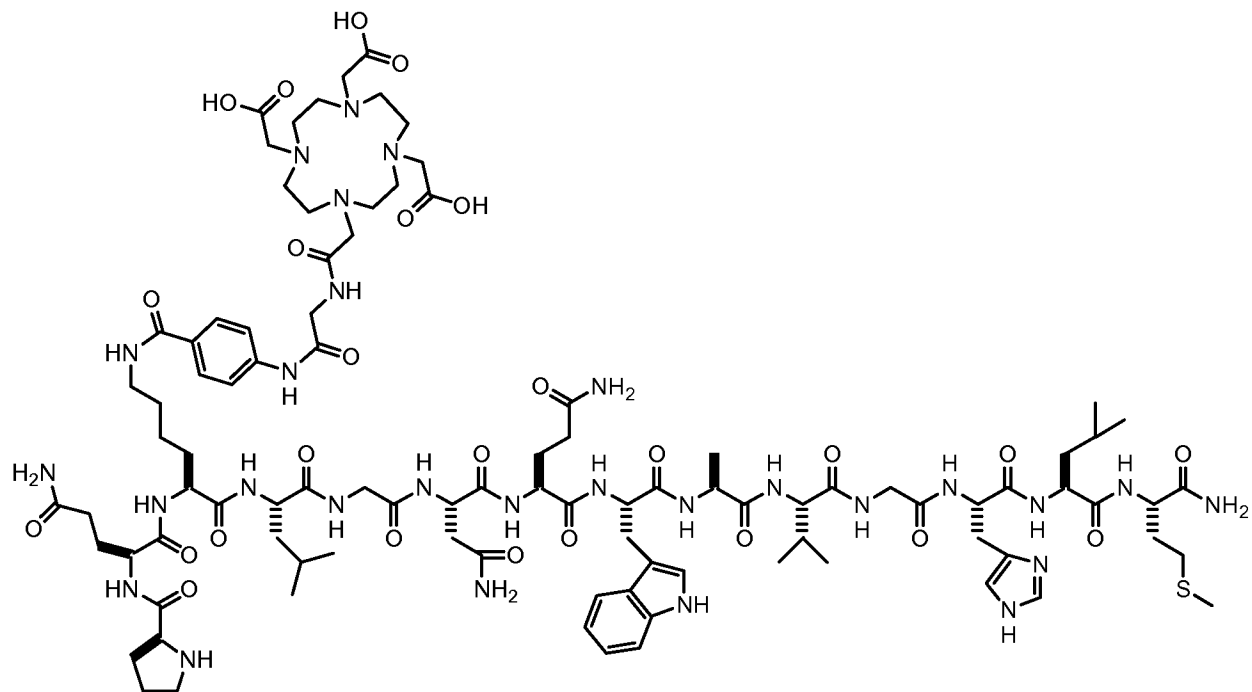
~~wherein at least one of N, O or P is a non-alpha amino acid.~~

89. (Cancelled)

90. (Currently Amended) The method of claim ~~89~~ 88, wherein N is Gly, O is 4-
aminobenzoic acid and P is none.

91-106 (Cancelled)

107. (Original) A compound having the following structure:



108. (New) The compound of claim 51, wherein M is selected from the group consisting of Boa and Cm4pm10d2a.

109. (New) The compound of claim 51, where M is selected from the group consisting of: N,N-dimethylGly-Ser-Cys;

N,N-dimethylGly-Thr-Cys;

N,N-diethylGly-Ser-Cys;

N,N-dibenzylGly-Ser-Cys;

N,N-dimethylGly-Ser-Cys-Gly;

N,N-dimethylGly-Thr-Cys-Gly ;

N,N-diethylGly-Ser-Cys-Gly; and